

CLAIMS

What is claimed is:

1. A method for completing a commercial transaction utilizing a system having a point of
5 sale terminal and a wireless device for transmitting commercial information to the point
of sale terminal, the method comprising the steps of:
providing for receiving a first infrared signal from a wireless device for establishing
communication with the wireless device without utilizing at least one infrared standard
procedure;
10 providing for receiving a second infrared signal comprising the commercial information;
and,
providing for processing the second infrared signal.
2. The method of claim 1 wherein the at least one infrared standard procedure comprises at
least one of an address conflict resolution procedure and a sniff-open procedure.
- 15 3. The method of claim 1 wherein the point of sale terminal comprises an optical interface
unit, the optical interface unit receiving the first and second infrared signals.
4. The method of claim 1 wherein the system further comprises an optical interface unit for
communicating the commercial information to the point of sale terminal.
5. The method of claim 1 wherein the step of establishing communication comprises at least
20 one of a discovery procedure and a connection procedure.
6. The method of claim 1 wherein the step of receiving the second infrared signal comprises
an information exchange procedure.
7. The method of claim 5 wherein the discovery procedure comprises an IrLAP Fast
Connect Address discovery procedure.
- 25 8. The method of claim 1 wherein the at least one infrared standard procedure comprises at
least one of an address conflict resolution procedure and a sniff-open procedure.
9. The method of claim 1 further comprising the step of completing the commercial
transaction.
10. The method of claim 1 wherein the commercial information comprises coupon
30 information.
11. The method of claim 10 wherein the coupon information comprises stock keeping unit
(SKU) data.

12. The method of claim 10 further comprising the steps of:
providing for storing the coupon information as received coupon information;
providing for comparing the received coupon information with recognized coupon
information; and,
5 providing for creating accepted coupon information comprising the received coupon
information that matches with the recognized coupon information.
13. The method of claim 12 further comprising the steps of:
providing for applying the accepted coupon information to the commercial transaction;
providing for creating remaining coupon information comprising the received coupon
10 information minus the accepted coupon information; and,
providing for transmitting the remaining coupon information to the wireless device.
14. The method of claim 12 further comprising a step of transmitting the accepted coupon
information to the wireless device.
15. The method of claim 1 further comprising the steps of securing the commercial
15 information, the method comprising the steps of:
providing for receiving a random key index;
providing for identifying an encryption key corresponding to the random key index; and
providing for decrypting the commercial information utilizing the encryption key.
16. The method of claim 1 wherein the commercial information comprises at least one of a
20 credit card data and a debit card data.
17. The method of claim 1 further comprising the step of providing for receiving a personal
identification number corresponding to the commercial information.
18. A method for completing a commercial transaction utilizing a system having a point of
sale terminal and a wireless device for transmitting coupon information to the point of
25 sale terminal, the method comprising the steps of:
providing for receiving an infrared signal comprising the coupon information;
providing for storing the coupon information as received coupon information; and,
providing for comparing the received coupon information with recognized coupon
information.
- 30 19. The method of claim 18 further comprising the step of providing for creating accepted
coupon information comprising the received coupon information that matches with the
recognized coupon information.

20. The method of claim 19 further comprising the steps of:
providing for applying the accepted coupon information to the commercial transaction;
providing for creating remaining coupon information comprising the received coupon
information minus the accepted coupon information; and,
5 providing for transmitting the remaining coupon information to the wireless device.
21. The method of claim 19 further comprising a step of transmitting the accepted coupon
information to the wireless device.
22. The method of claim 18 further comprising the step of providing for receiving a first
infrared signal from a wireless device for establishing communication with the wireless
10 device without utilizing at least one infrared standard procedure, wherein the step of
providing for receiving an infrared signal comprising the coupon information comprises
providing for receiving a second infrared signal comprising the coupon information.
23. The method of claim 22 wherein the at least one infrared standard procedure comprises at
least one of an address conflict resolution procedure and a sniff-open procedure.
- 15 24. The method of claim 22 wherein the step of establishing communication comprises at
least one of a discovery procedure and a connection procedure.
25. The method of claim 24 wherein the discovery procedure comprises an IrLAP Fast
Connect Address discovery procedure.
26. The method of claim 22 wherein the at least one infrared standard procedure comprises at
20 least one of an address conflict resolution procedure and a sniff-open procedure.
27. The method of claim 18 wherein the point of sale terminal comprises an optical interface
unit, the optical interface unit receiving the infrared signal.
28. The method of claim 18 wherein the system further comprises an optical interface unit
for communicating the coupon information to the point of sale terminal.
- 25 29. The method of claim 18 wherein the step of receiving the infrared signal comprises an
information exchange procedure.
30. The method of claim 18 wherein the coupon information comprises stock keeping unit
(SKU) data.
31. The method of claim 18 further comprising the steps of securing the commercial
30 information, the method comprising the steps of:
providing for receiving a random key index;

- providing for identifying an encryption key corresponding to the random key index; and
providing for decrypting the commercial information utilizing the encryption key.
32. The method of claim 18 further comprising the step of providing for receiving a personal identification number corresponding to the commercial information.
- 5 33. A method for completing a commercial transaction utilizing a system having a point of sale terminal and a wireless device for transmitting commercial information to the point of sale terminal through infrared transmission, the method comprising the steps of:
providing for receiving a random key from a key index;
providing for identifying the random key; and,
10 providing for decrypting the commercial information utilizing the random key.
34. The method of claim 33 wherein the step of providing for identifying the random key comprises providing for identifying the random key from a second key index.
35. The method of claim 34 wherein the second key index is identical to the key index.
36. The method of claim 33 wherein the process of transmitting commercial information to
15 the point of sale terminal comprises a plurality of uniquely encrypted individual infrared transmissions.
37. The method of claim 33 further comprising the steps of:
providing for receiving a first infrared signal from a wireless device for establishing
communication with the wireless device without utilizing at least one infrared standard
20 procedure;
providing for receiving a second infrared signal comprising the commercial information;
and,
providing for processing the second infrared signal.
38. The method of claim 37 wherein the at least one infrared standard procedure comprises at
25 least one of an address conflict resolution procedure and a sniff-open procedure.
39. The method of claim 37 wherein the point of sale terminal comprises an optical interface unit, the optical interface unit receiving the first and second infrared signals.
40. The method of claim 37 wherein the system further comprises an optical interface unit for communicating the commercial information to the point of sale terminal.
- 30 41. The method of claim 37 wherein the step of establishing communication comprises at least one of a discovery procedure and a connection procedure.

42. The method of claim 37 wherein the step of receiving the second infrared signal comprises an information exchange procedure.
43. The method of claim 41 wherein the discovery procedure comprises an IrLAP Fast Connect Address discovery procedure.
- 5 44. The method of claim 37 wherein the at least one infrared standard procedure comprises at least one of an address conflict resolution procedure and a sniff-open procedure.
45. The method of claim 37 further comprising the step of completing the commercial transaction.
46. The method of claim 37 wherein the commercial information comprises coupon
10 information.
47. The method of claim 46 wherein the coupon information comprises stock keeping unit (SKU) data.
48. The method of claim 46 further comprising the steps of:
providing for storing the coupon information as received coupon information;
15 providing for comparing the received coupon information with recognized coupon information; and,
providing for creating accepted coupon information comprising the received coupon information that matches with the recognized coupon information.
49. The method of claim 48 further comprising the steps of:
20 providing for applying the accepted coupon information to the commercial transaction;
providing for creating remaining coupon information comprising the received coupon information minus the accepted coupon information; and,
providing for transmitting the remaining coupon information to the wireless device.
50. The method of claim 48 further comprising a step of transmitting the accepted coupon
25 information to the wireless device.
51. A method for completing a commercial transaction utilizing a system having a point of sale terminal and a wireless device for transmitting coupon information to the point of sale terminal, the method comprising the steps of:
providing for receiving an electromagnetic signal comprising the coupon information;
30 providing for storing the coupon information as received coupon information; and,
providing for comparing the received coupon information with recognized coupon information.

52. The method of claim 51 further comprising the step of providing for creating accepted coupon information comprising the received coupon information that matches with the recognized coupon information.
53. The method of claim 52 further comprising the steps of:
- 5 providing for applying the accepted coupon information to the commercial transaction;
providing for creating remaining coupon information comprising the received coupon information minus the accepted coupon information; and,
providing for transmitting the remaining coupon information to the wireless device.
54. The method of claim 52 further comprising a step of transmitting the accepted coupon information to the wireless device.
- 10 55. The method of claim 51 wherein the electromagnetic signal is an infrared signal.
56. The method of claim 55 further comprising the step of providing for receiving a first infrared signal from a wireless device for establishing communication with the wireless device without utilizing at least one infrared standard procedure, wherein the step of
- 15 providing for receiving an infrared signal comprising the coupon information comprises providing for receiving a second infrared signal comprising the coupon information.
57. The method of claim 56 wherein the at least one infrared standard procedure comprises at least one of an address conflict resolution procedure and a sniff-open procedure.
58. The method of claim 56 wherein the step of establishing communication comprises at
- 20 least one of a discovery procedure and a connection procedure.
59. The method of claim 58 wherein the discovery procedure comprises an IrLAP Fast Connect Address discovery procedure.
60. The method of claim 56 wherein the at least one infrared standard procedure comprises at least one of an address conflict resolution procedure and a sniff-open procedure.
- 25 61. The method of claim 55 wherein the point of sale terminal comprises an optical interface unit, the optical interface unit receiving the infrared signal.
62. The method of claim 51 wherein the system further comprises an optical interface unit for communicating the coupon information to the point of sale terminal.
63. The method of claim 55 wherein the step of receiving the infrared signal comprises an
- 30 information exchange procedure.
64. The method of claim 51 wherein the coupon information comprises stock keeping unit (SKU) data.

65. The method of claim 51 further comprising the steps of securing the commercial information, the method comprising the steps of:
- providing for receiving a random key index;
 - providing for identifying an encryption key corresponding to the random key index; and
 - providing for decrypting the commercial information utilizing the encryption key.
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66. The method of claim 51 further comprising the step of providing for receiving a personal identification number corresponding to the commercial information.